


U.S. NUCLEAR REGULATORY COMMISSION REGION I
OPERATOR LICENSING REQUALIFICATION EXAMINATION REPORT

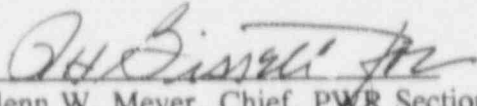
REPORT NO.: 50-336/92-33 (OL-RQ)
LICENSE NO.: DRP-65
LICENSEE: Northeast Nuclear Energy Company
P. O. Box 270
Hartford, CT 06141-0270
FACILITY: Millstone Nuclear Power Station, Unit 2
DATES: December 14 - 17, 1992
EXAMINER: Mark Jones, NRC Consultant (EG&G)

CHIEF EXAMINER:


Kerry D. Ihnen, Operations Engineer
PWR Section, Operations Branch, DRS

1/27/93
Date

APPROVED BY:


Glenn W. Meyer, Chief, PWR Section
Operations Branch, DRS

1/27/93
Date

SUMMARY: Requalification written examinations and operating tests were administered to three senior reactor operators (SROs) and two reactor operators (ROs). These examinations were administered in accordance with proposed Revision 7 to NUREG-1021. The quality of the written exams was improved as compared to previous written exams. All five operators passed their examinations. The three SROs and two ROs also operated successfully as a crew during two simulator scenarios. The results from this examination were combined with the results of the previous requalification examination administered in April 1992 in order to perform a program evaluation of the requalification training program. Six SROs and three ROs were examined during the April 1992 examination, and all nine operators passed all portions of the examination. A program evaluation, however, had been deferred until completion of this examination, since a total of 12 licensed operators is needed for a program evaluation.

Based upon the results of 14 licensed operators having been examined and successfully passing all portions of the examination including the evaluation of 3 operating crews during the simulator evaluation, Millstone 2's licensed operator requalification training program was determined to be satisfactory.

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In conjunction with this examination, the examiner inspected the programmatic aspects of the MP-2's licensed operator requalification training program. The purpose of this inspection was to ascertain whether there existed any generic deficiencies that were common with those identified during the Millstone 1 unsatisfactory licensed operator requalification program. Upon completion of this inspection, it was determined that there were no significant deficiencies similar to those identified with the Millstone 1 requalification training program.

DETAILS

TYPE OF EXAMINATION: Requalification

1.0 EXAMINATION RESULTS:

	RO Pass/Fail	SRO Pass/Fail	Total Pass/Fail
Written	2/0	3/0	5/0
Simulator	2/0	3/0	5/0
Walk-through	2/0	3/0	5/0
Overall	2/0	3/0	5/0

The examination results noted above reflect 100% agreement between the NRC evaluators and the Millstone Unit 2 evaluators.

2.0 PROGRAM EVALUATION RESULTS

2.1 Background

On November 4, 1992, representatives from the Millstone Plant, Unit 2 (MP-2) training department met in Region I with the NRC to discuss the scheduled December 1992 requalification examination. The purpose of the meeting was to discuss various aspects of the proposed Revision 7 to the Examiner Standards, under which the requalification examination would be conducted. The majority of discussion dealt with major differences between the approved Revision 6 and the proposed Revision 7.

Further discussion dealt with administrative aspects of the examination. It was noted that results from the April 1992 requalification examination, in which nine licensed operators were examined, would be combined with the results of the upcoming December 1992 examination. A minimum of twelve licensed operators are needed in order for the NRC to make a training program evaluation. Five operators were scheduled for the December 1992 examination and when combined with the April 1992 examination, the minimum total of twelve operators examined would be met. Thus, a program evaluation could be performed.

From December 1 - 4, 1992, the NRC reviewed the proposed examination with MP-2 training and operations representatives at the MP-2 site. This detailed review included a review of the adequacy of the written examination questions, a walkdown of all job performance measures (JPMs) and the validation of the simulator scenarios. The validation of the simulator scenarios included a review of expected operator actions and the validity of designated crew critical tasks.

2.2 Overall Rating: Satisfactory

The Millstone Plant, Unit 2 (MP-2) program for licensed operator requalification training was rated satisfactory in accordance with the criteria established in the proposed Revision 7 of ES-601, "Administration of NRC Requalification Program Evaluation." Those criteria are as follows:

- A. At least 75% of all operators pass all portions of the examination. This number includes operators who participate in the simulator examination for the purpose of meeting crew composition requirements.

NRC grading is the only consideration for this criterion. There were no individuals who participated in the simulator portion of the examination in order to meet crew requirements. Fourteen of fourteen operators (100%) passed the examination.

- B. At least two-thirds (66%) of the crews pass the simulator examination.

NRC grading is the only consideration for this criterion. Three crews were evaluated, and all three crews (100%) passed the simulator portion of the operating examination.

The requalification program met these criteria and was rated as satisfactory.

2.3 Programmatic Strengths and Weaknesses

A. Strengths:

- MP-2 training evaluators were very knowledgeable in all aspects of the exam process and presented themselves in a very professional manner during the administration of the exam.
- The written and simulator exams were improved and were good tools in determining the competencies of the operators.
- The crew examined on the simulator demonstrated good teamwork and effective face-to-face communications.

B. Weaknesses:

No weaknesses were noted.

3.0 REQUALIFICATION TRAINING PROGRAM INSPECTION

As a result of the Millstone 1 unsatisfactory requalification training program evaluation and the fact that MP-1 and MP-2 operate from the same training facility and under the same organizational structure, it was determined that an inspection of the MP-2 requalification training program was warranted. The purpose of the inspection was to determine if any problems identified with the MP-1 requalification training program were also generic to the MP-2 training program.

In conjunction with this examination, the examiner inspected the programmatic aspects of the MP-2's licensed operator requalification training program. The purpose of this inspection was to ascertain whether there existed any generic deficiencies that were common with those identified during the Millstone 1 unsatisfactory licensed operator requalification program. Upon completion of this inspection, it was determined that there were no significant deficiencies similar to those identified with the Millstone 1 requalification training program.

4.0 EXIT MEETING

On December 17, 1992, at the conclusion of the requalification examination, the NRC conducted an exit meeting at the Millstone training facility. Those personnel in attendance are noted in paragraph 4.0 of this report. Examination development and conduct, general observations noted during the exam, and programmatic strengths and weaknesses were discussed. Examination results, as determined by both the NRC and MP-2, were also discussed.

5.0 KEY PERSONNEL CONTACTED:

Northeast Nuclear Energy Company

- * B. Puth Manager, Operator Training
- * J. Smith Operations Manager, MS-2
- * R. Spurr Training Supervisor, MP-3

U. S. Nuclear Regulatory Commission

- * K. Ihnen Operations Engineer
- M. Jones NRC Consultant
- * R. Laufer NRR/OLB

* Denotes those present at the exit meeting conducted December 17, 1992.

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
NEW YORK WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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January 11, 1993
MP-93-36

RE: NUREG 1021, ES-601

Mr. Lee H. Bettenhausen
Chief, Operations Branch, DRS
U. S. Nuclear Regulatory Commission, Region 1
475 Allendale Road
King of Prussia, PA 19406

REFERENCE: Facility Operating License No. DPR-65
Docket No. 50-336
NRC Regualification Examination Summary

Dear Mr. Bettenhausen:

During the week of December 14, 1992, Licensed Operator Regualification Examinations were administered to five Millstone Unit 2 Licensed Operators and Senior Licensed Operators. These examinations were conducted in accordance with the applicable sections of the Revision 7 draft of NUREG 1021, Operator Licensing Examiner Standards. Accordingly, the examinations were prepared, administered, and evaluated by both NRC and facility examiners.

Preliminary results of the facility evaluations for all portions of the examination were provided to Mr. Kerry Ihnen, NRC Chief Examiner, on December 16, 1992. Based on our review of the exam grading, these results can be considered final. Attached is a summary of our grades.

An evaluation of the examination results was performed to identify strengths and weaknesses, both individual and crew, and to identify necessary remediation and enhancements to the MP2 Licensed Operator Regualification Program content. The following is a summary, by examination environment, of the evaluation:

SIMULATOR EXAMINATIONS

STRENGTHS:

- o Teamwork, communications and crew interaction. Where appropriate, team members were involved in decision-making and shared with each other information concerning event strategy and inter-watchstation operations. Individual team members operated within their pre-defined roles. Communications was especially strong.

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- o Proper selection and implementation of emergency operating procedures.
- o Attention to annunciators and use of the alarm response procedures.
- o Diagnosis of events, both major and minor.
- o Event classification in accordance with the emergency plan

WEAKNESSES:

None of the weaknesses listed below are considered of such significance that they require formal individual or crew remediation. Where appropriate, increased emphasis will be placed on these items during simulator training sessions.

- o One RO attempted to throttle auxiliary feed regulating valves with the controller in Auto. The operator realized his oversight, shifted the controllers to manual and then throttled the valves.
- o In one scenario the PPO restored letdown flow without adequately checking the availability of Reactor Building Closed Cooling Water (RBCCW). The B RBCCW header, which supplies letdown heat exchanger cooling, was initially unavailable due to a loss of facility 2 emergency power. The SPO was restoring facility 2 power and vital auxiliaries in parallel with the PPO's reinitiation of letdown. RBCCW was independently restored prior to any system feedback to the PPO.

WALKTHROUGH EXAMINATION

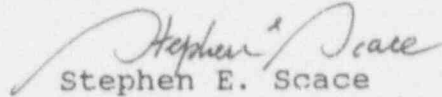
The examinees demonstrated a high degree of proficiency and knowledge for the tasks examined. All JPM's were performed satisfactorily.

WRITTEN EXAMINATION

Examinee performance on the written examination was generally excellent, showing a sound mastery of the learning objectives examined. There were no weaknesses identified.

Yours Truly,

NORTHEAST NUCLEAR ENERGY COMPANY



Stephen E. Scace
Station Vice President
Millstone Nuclear Power Station

Attachment
SES/RNS/dsb

c: Document Control Desk, US NRC
B. W. Ruth, Manager, Operator Training
R. M. Kacich, Director, Nuclear Licensing, NU
K. Ihnen, US NRC
W. J. Raymond, NRC Resident Inspector

**LORT EXAMINATION SUMMARY
WEEK OF DECEMBER 14, 1992**

NAME	SIMULATOR		SS 1	OPEN REFERENCE	WRITTEN TOTAL		JPM'S	
	FAC.	NRC			FAC.	NRC	FAC.	NRC
OPERATOR A	Sat		13/13 100%	22/23 95.65	97.82		Sat	
OPERATOR B	Sat		13/13 100%	23/23 100	100		Sat	
OPERATOR C	Sat		13/13 100%	22/23 95.65	97.82		Sat	
OPERATOR D	Sat		12.75/13 98%	22/23 95.65	96.82		Sat	
OPERATOR E	Sat		12.75/13 98%	20/23 86.96	92.48		Sat	

ATTACHMENT 2

SIMULATION FACILITY REPORT

Facility Licensee: MP-2

Facility Docket No.: 50-336

Requalification Examinations Administered from: December 15 - 17, 1992

This form is used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following item was observed.

<u>ITEM</u>	<u>DESCRIPTION</u>
	Subcooled Margin and Natural circulation flow when at saturated conditions is not pressurizer level accurately modeled by the single phase reactor coolant system (RCS) model. As the core temperature increased to saturation, the model causes a large steam void in the upper vessel region and an associated increase in pressurizer level. This is shown as a loss of subcooled margin. The step increase in pressurizer level causes a step increase in RCS pressure. The step increase in RCS pressure seen in the next iteration causes the vessel to be significantly subcooled and the steam void disappears. Mass is transferred from the pressurizer to the vessel causing a step decrease in pressurizer level. This step decrease in pressurizer level causes a step decrease in RCS pressure. Saturation conditions exist again in the vessel and the steam void reappears, starting the cycle all over again. This cycle would continue to repeat on approximately 30 second intervals. Northeast Utilities is currently working with the vendor to acquire new two-phase codes for the RCS.